

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, DC 20554**

In the Matter of)	
)	
Establishing the Digital Opportunity Data Collection)	WC Docket No. 19-195
)	
Modernizing the FCC Form 477 Data Program)	WC Docket No. 11-10
)	

**JOINT COMMENTS OF USTELECOM ASSOCIATION – THE BROADBAND
ASSOCIATION, ITTA – THE VOICE OF AMERICA’S BROADBAND PROVIDERS
AND THE WIRELESS INTERNET SERVICE PROVIDERS ASSOCIATION**

B. Lynn Follansbee
Vice President, Policy & Advocacy
USTelecom – The Broadband Association
601 New Jersey Avenue, NW, Suite 600
Washington, DC 20001
202-326-7256

Michael J. Jacobs
Vice President, Regulatory Affairs
ITTA – The Voice of America’s
Broadband Providers
110 N. Royal Street, Suite 550
Alexandria, VA 22314
202-898-1520

Louis Peraertz
Vice President, Policy
WISPA
4417 13th St. #317
Saint Cloud, FL 34769
866-317-2851

September 23, 2019

EXECUTIVE SUMMARY

There is widespread bipartisan agreement that broadband mapping needs to improve – Members of Congress, the Administration, the Federal Communications Commission, state and local government leaders, the broadband industry, and consumers all agree. More accurate and more granular broadband mapping will better define the areas where broadband is available and where it is not, and should serve as the foundation for directing finite resources where they can be most effective.

As leaders of the Broadband Mapping Coalition, USTelecom – The Broadband Association, ITTA – The Voice of America’s Broadband Providers and WISPA support the adoption, implementation and ongoing maintenance of its proposed Broadband Serviceable Location Fabric into the Digital Opportunity Data Collection as the new gold standard for fixed broadband data collection. Informed by the Coalition’s two-state mapping pilot program demonstrating the ability to efficiently create a highly granular, scalable, national Fabric, in addition to its members’ experiences with FCC Form 477 deployment and subscription data reporting and High Cost Universal Broadband portal locations reporting, the Coalition offers several recommendations to facilitate successful and timely implementation of the Fabric in a manner that balances the benefits of more accurate and granular broadband data reporting with the burdens on providers to collect, assemble and report their deployment information. Specific recommendations include the following:

Adopt a National Broadband Serviceable Location Fabric

- Build on the Broadband Mapping Coalition’s Pilot to create a nationwide Fabric to improve the accuracy and granularity of broadband reporting by expanding past the limits of the current “one-served all-served” methodology and eliminating inconsistent commercial geocoded data which impacts Commission policy.
- Record each serviceable structure as a single point and build on the Commission’s existing guidance to clarify its definition of “location” across multiple USF proceedings.
- Utilize a nationwide Broadband Service Location Fabric as a foundation upon which reporting is anchored as a way to improve accuracy in a cost-effective manner.

Implement an Improved Data Collection With Minimized Reporting Burdens

- Adopt “safe harbors” for polygon reporting that provide flexibility and afford providers the opportunity to utilize methodologies most appropriate to their networks, but also have a buffer zone around reference points that maintains a level of uniformity and comparability.
- Do not require providers to report latency data in the context of this collection, which is focused on broadband availability.
- Ensure that the reporting regime implemented does not penalize reporting entities for errors in their data unless it is demonstrated that the errors are the result of willful misrepresentation or repeated negligence.

- Maps and datasets should have uniform characteristics to the maximum extent possible.

Carefully Craft the Commission's Proposed Public Challenge Regime

- Do not require providers to check periodically for challenges to their data.
- Allow providers to correct any inaccurate data at the next filing opportunity.
- Retain USAC's role in the challenge process to one of administrative oversight.
- Apply a "clear and convincing" evidentiary standard to the challenge process.
- Require challenger certifications to be under penalty of perjury.
- Only allow Governmental and Tribal entities to submit bulk challenges.
- Due to the inconsistencies in commercial geocoders, do not allow individuals to submit geocoordinates for purposes of challenging service availability.

Sunset FCC Form 477

- Discontinue the broadband deployment data collection that is part of the FCC Form 477 once the new data collection process has been established.

TABLE OF CONTENTS

I. INTRODUCTION.....	1
II. A NATIONAL BROADBAND SERVICEABLE LOCATION FABRIC SHOULD BE ADOPTED AND SERVE AS THE FOUNDATION FOR FIXED BROADBAND DATA REPORTING	4
A. The Broadband Mapping Coalition’s Pilot Results Show That A Nationwide Fabric Is Scalable And Will Improve The Accuracy And Granularity Of Broadband Reporting ...	5
B. Inconsistencies In Location Definitions Must Be Resolved	12
C. Utilizing The BSLF As A Foundation For Reporting Is A Cost-Effective Way To Improve Accuracy	17
III. THE COMMISSION SHOULD IMPLEMENT IMPROVED DATA COLLECTION WITH MINIMIZED REPORTING BURDENS	20
A. The FCC Should Adopt Standard “Safe Harbors” For Polygon Reporting.....	21
B. There Is No Reasonable Basis For, Or Potential Benefit To Be Gained From, Requiring All Providers To Report Latency Data	22
C. Service Providers Should Not Be Penalized For Submitting Inaccurate Data Absent Clear Evidence Of Intentional Or Persistent Misreporting	24
D. Maps And Datasets Should Have Uniform Characteristics To The Maximum Extent Possible	26
IV. THE COMMISSION SHOULD CAREFULLY CRAFT ITS PUBLIC CHALLENGE REGIME	26
A. The Challenge Process Should Focus On The Outcome Of Improving Broadband Coverage Data And Maps In A Manner That Minimizes The Burdens On Providers ...	28
B. Only Governmental/Tribal Entities Should Be Eligible To Submit Bulk Challenges....	35
C. With The Exception Of Coordinates, The Data Proposed For USAC To Collect For The Challenge Process Is Sound	37
V. THE COMMISSION SHOULD SUNSET FORM 477 AFTER PROVIDERS HAVE SUBMITTED REQUIRED DATA INTO THE FABRIC PORTAL	38
VI. CONCLUSION	39

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Establishing the Digital Opportunity Data Collection)	WC Docket No. 19-195
)	
Modernizing the FCC Form 477 Data Program)	WC Docket No. 11-10
)	

**JOINT COMMENTS OF USTELECOM ASSOCIATION – THE BROADBAND
ASSOCIATION, ITTA – THE VOICE OF AMERICA’S BROADBAND PROVIDERS
AND THE WIRELESS INTERNET SERVICE PROVIDERS ASSOCIATION**

USTelecom – The Broadband Association (“USTelecom”), ITTA – The Voice of America’s Broadband Providers (“ITTA”) and the Wireless Internet Service Providers Association (“WISPA”) (collectively, the “Joint Commenters”) hereby submit their joint comments in the above-captioned proceeding to inform the Federal Communications Commission’s (“FCC” or “Commission”) efforts to improve the accuracy and granularity of fixed broadband reporting.¹

I. INTRODUCTION

The Joint Commenters support the Commission’s development of robust new data collection tools to more accurately identify and depict broadband service availability. There is widespread bipartisan agreement that broadband mapping needs to improve – Members of Congress,² the Administration,³ the Commission, state and local government leaders, the

¹ *Digital Opportunity Data Collection*, Report and Order and Second Further Notice of Proposed Rulemaking, WC Docket Nos. 19-195 and 10-90, FCC 19-79 (rel. Aug. 6, 2019) (“*R&O*” and “*2nd FNPRM*”).

² See Broadband Deployment Accuracy and Technological Availability (DATA) Act (S. 1822)

broadband industry, and consumers all agree. More accurate and more granular broadband mapping will better define the areas where broadband is available and where it is not. And this information should serve as the foundation for directing finite resources where they can be most effective. As leaders of the Broadband Mapping Coalition (“BMC”) which initiated a two-state mapping pilot program (“Pilot”) demonstrating the ability to efficiently create a highly granular, scalable, national Broadband Serviceable Location Fabric (“Fabric” or “BSLF”), the Joint Commenters appreciate the Commission’s proposal “to create and integrate a broadband serviceable location tool into the Digital Opportunity Data Collection”⁴ and its recognition that the Pilot “represents a concrete effort to identify the issues facing [the Universal Service Administrative Company (“USAC”)] in moving to a location-based collection.”⁵

To that end, the Joint Commenters support the adoption, implementation and ongoing maintenance of the Fabric as the new gold standard for fixed broadband data collection. Informed by the Pilot, and its members’ experiences with FCC Form 477 deployment and subscription data reporting as well as High Cost Universal Broadband (“HUBB”) portal locations reporting, the Joint Commenters offer several recommendations to facilitate successful and timely implementation of the Fabric in a manner that balances the benefits of more accurate and granular broadband data reporting with the burdens on providers to collect, assemble and report their deployment information. Properly implemented, the Joint Commenters encourage the Commission to use the BSLF for more than just general data collection, including using the

and Broadband Deployment Accuracy and Technological Availability (DATA) Act (HR 4229); *see also* Testimony of Jonathan Spalter, President and CEO of USTelecom – The Broadband Association Before the Subcommittee on Telecommunications and Technology, United States House of Representatives (Sept. 11, 2019).

³ *See*

https://www.ntia.doc.gov/files/ntia/publications/american_broadband_initiative_milestones_report.pdf (pg. 28).

⁴ *See 2nd FNPRM* at ¶ 101.

⁵ *See id.* at ¶ 100.

BSLF for all Commission universal service programs. It may also benefit other federal and state broadband deployment programs.

The Joint Commenters have described how the initial Fabric can be completed within 12-15 months from the date it is green-lighted, a time frame that should enable its availability and use for allocation of Rural Digital Opportunity Fund (“RDOF”) support if the Commission proceeds expeditiously.⁶ As a predicate to the development of the Fabric, however, it will be necessary for the Commission to provide additional guidance on the kinds of “locations” that the Fabric should include. The Joint Commenters offer a number of recommendations similar to those submitted last fall in response to the Commission’s *CAF II Locations Discrepancies Public Notice*,⁷ to help facilitate this objective and are committed to working with each other and the Commission to provide greater certainty and clarity.

The Joint Commenters support the Commission’s adoption of polygons – or RF propagation studies in the case of fixed wireless service – especially as a reporting methodology to overlay the Fabric. Therefore, we support the creation of the BSLF in parallel with establishing the polygon-based portal authorized in the *R&O* in order to prevent the creation of two different datasets or two different processes with potentially differing metrics. We recommend that the Commission adopt “safe harbors” to delineate polygons for fixed services to reflect real-world deployments, while also affording providers the option to rely on different methodologies, so long as they are reasonable and explained. It is for this reason, among others, that we support the creation of the BSLF in parallel with creation of a polygon-based portal.

⁶ *Rural Digital Opportunity Fund; Connect America Fund*, WC Docket Nos. 19-126 and 10-90 (rel. Aug. 2, 2019) (“*RDOF NPRM*”). Each of the Joint Commenters filed separate Comments in response to the *RDOF NPRM*.

⁷ Public Notice, *Wireline Competition Bureau Seeks Comment on Procedures to Identify and Resolve Location Discrepancies in Eligible Census Blocks Within Winning Bid Areas*, 33 FCC Rcd 8620 (WCB 2018) (“*CAF II Locations Discrepancies Public Notice*”).

Although latency may be a relevant metric when assessing broadband performance, the Joint Commenters oppose the inclusion of latency as a reportable metric for broadband *availability*. The Commission has consistently rejected latency reporting as a fundamental measure of broadband availability,⁸ and the burdens of requiring latency reporting outweigh whatever marginal benefits could be gained from attempting to collect this data from broadband providers.

The Commission should carefully craft its public challenge process. Broadband providers should not be penalized for unintentional inaccuracies in data reporting, and challengers should comply with reasonable *prima facie* requirements to ensure that the public process does not unnecessarily or disproportionately burden providers. There may even be cases that Commission staff can resolve without the involvement of the provider.

II. A NATIONAL BROADBAND SERVICEABLE LOCATION FABRIC SHOULD BE ADOPTED AND SERVE AS THE FOUNDATION FOR FIXED BROADBAND DATA REPORTING

The Joint Commenters, as the BMC, have proposed a long-term solution to the nation's broadband mapping demands that will meet the needs of policymakers, American consumers, businesses, and broadband service providers.⁹ We appreciate and support the Commission's view that there are benefits to incorporating nationwide location data into the Digital Opportunity Data Collection¹⁰ and we are pleased that the Commission has proposed to adopt the BMC's initiative.¹¹ In the *2nd FNPRM* the Commission asks various questions about how the USAC can collect and incorporate such data, what data is needed for USAC to implement the task, and how USAC could obtain access to that data in order to establish a process where all broadband-serviceable locations (*e.g.*, houses, businesses, structures) are mapped using a single

⁸ *2019 Broadband Deployment Report*, GN Docket No. 18-238 (rel. May 29, 2019) at 9, ¶ 19.

⁹ See Letter of B. Lynn Follansbee, VP–Law & Policy, USTelecom to Marlene H. Dortch, Secretary, FCC, WC Docket No. 11-10, (Oct. 17, 2018).

¹⁰ See *2nd FNPRM* at ¶ 99.

¹¹ See *id.*

methodology, providing a harmonized reference point for fixed broadband reporting.¹² Since the Commission adopted the *R&O* and the 2nd *FNPRM* on August 1, the BMC completed the Pilot demonstrating the ability to build a comprehensive BSLF in two states, providing a blueprint for how the Fabric can be established for the entire country in a timely and cost-effective manner. As a result, the Joint Commenters have a wealth of informative data to share with the Commission about how to develop a useful location fabric. The data, contained in the *Pilot Report*, demonstrates the viability of a location-based proposal.¹³

A. The Broadband Mapping Coalition’s Pilot Results Show That A Nationwide Fabric Is Scalable And Will Improve The Accuracy And Granularity Of Broadband Reporting

In attempting to find a better solution to broadband mapping, it was clear to the BMC from the outset that no single available data source can accomplish that task. However, in recent years, with the advent of big data collection and machine learning capabilities the Joint Commenters discovered disparate streams of information to yield remarkably detailed data sets not possible when the original *2017 Data Collection Improvement FNPRM* was adopted.¹⁴ To create the BSLF, multiple data sources, scoring routines, and managed visual review are required. These data sources include parcel boundaries, parcel attributes (*e.g.*, land use, assessed value, number of units), building polygons, and addresses. In planning the Pilot, the BMC engaged CostQuest Associates (“CostQuest”) to review public, open source, and private/commercial data sources to determine which are the most complete, high quality, and

¹² See *id.*, citing, Letter of B. Lynn Follansbee, VP–Law & Policy, USTelecom to Marlene H. Dortch, Secretary, FCC, WC Docket No. 11-10, 10-90 (Mar. 21, 2019) at 2.

¹³ See Letter from Jonathan Spalter, President & CEO, USTelecom – The Broadband Association, Genevieve Morelli, President, ITTA, Claude Aiken, President and CEO, WISPA to Marlene H. Dortch, Secretary, FCC, WC Docket Nos. 19-195, 11-10, 10-90 and accompanying “Broadband Mapping Initiative Proof of Concept Summary of Findings Report” (Aug. 20, 2019) (“*Pilot Report*”).

¹⁴ See *Modernizing the FCC Form 477 Data Program*, WC Docket No. 11-10, Further Notice of Proposed Rulemaking, 32 FCC Rcd 6329 (2017) (“*2017 Data Collection Improvement FNPRM*”).

useful for this purpose.¹⁵ While there are many impressive open source data sets available (*e.g.*, OpenAddress, Microsoft's rooftop database), we found that they are not as comprehensive, reliable, and maintained as some commercial data sources. The Pilot tested the benefits and use of both commercial and open source data as a means of increasing the confidence level of the output generated through the Fabric creation process.

Similarly, while some states and counties make digitized parcel data publicly available for free, the effort to collect and normalize such data would entail a significant effort that can be avoided because commercial sources have laboriously collected, validated, and organized such parcel data. Other data elements that were used included land attribute records, road data and georeferenced addresses where available. All of these data sources were analyzed and layered in a way that ultimately identified and validated which structures on a parcel of land are the serviceable structures and determined the latitude and longitude of the rooftop of the relevant structures.¹⁶ The database of these latitude/longitude geocoded locations was assigned a location type (*e.g.*, residential, business, community anchor) and was scored to provide a level of certainty or confidence that the data is correct.

While combining multiple data sources will give a high level of certainty in most cases, there will be areas of the country where data is scarce or conflicting. In those cases, a person needs to review the available data to provide additional confidence. For the Pilot, CostQuest used a managed crowdsourcing visual review process to, for example, inspect satellite imagery to align building data with visible structures or to validate an incomplete attribute record.

CostQuest sent out a total of 140,000 records for review in both Pilot states (Missouri and

¹⁵ See *Pilot Report* at 61-65 for data sources used.

¹⁶ See, *e.g.*, the example in the Pilot Report, where a parcel contained multiple structures (house, storage shed, garage, etc.). The process identified the primary structure on the parcel as the serviceable structure and eliminated other structures. See *id.* at 25.

Virginia) to demonstrate the effort and the potential benefit¹⁷ and we anticipate that for the nationwide Fabric approximately 1.5 million reviews would be needed, with a higher incidence of visual verification occurring in rural and remote areas.

We commend the Commission's observation that the Pilot represents a concrete effort to identify the issues facing USAC in moving to a location-based collection¹⁸ and we agree that the Commission should encourage USAC to build on the Pilot's success to create the Commission proposed nationwide BSLF database that would be incorporated with DODC reporting.

Limits of Existing Reporting. As explained in the *Pilot Report*,¹⁹ the Fabric for Missouri and Virginia revealed a significant number of unserved locations in rural census blocks that are currently designated as "served" using the Form 477 "one served-all served" census block reporting requirement. For example, the Pilot identified a range of 445,000 to 200,000 locations (38 percent to 20 percent of the rural census block total locations) that are likely not served by the BMC participants but are counted as served today in FCC Form 477.²⁰ That we don't actually know the precise number of unserved locations due to a lack of participation in the Pilot by some providers demonstrates why the Commission should establish the BSLF and require broadband availability reporting on top of it. The findings also showed that in rural locations

¹⁷ See *id.* at 47.

¹⁸ See 2nd FNPRM at ¶ 99.

¹⁹ See *Pilot Report* at 7 & 36-38.

²⁰ We noted in our advocacy associated with the *Report* that although the Pilot was open to all providers not every broadband provider chose to participate in the Pilot, so the actual number of unserved locations is likely to be somewhat lower. In an effort to find a lower bound for this number, CostQuest reviewed the census blocks that non-participating providers reported as "served" on FCC Form 477 and considered all locations within those census blocks to be completely served (which would determine the least number of possible unserved locations if every location in the non-participating providers service had access to broadband, a highly unlikely proposition given the rural nature of the areas in question). This exercise revealed the number of unserved locations within served census blocks to be approximately 200,000 in both states combined, which amounts to about 20 percent of the total rural census block locations. See Letter from B. Lynn Follansbee, VP – Policy & Advocacy, USTelecom – The Broadband Association, to Marlene H. Dortch, Secretary, FCC, WC Docket Nos. 19-195, 11-10, 10-90 (Aug. 20, 2019).

found in the Fabric, the Commission's estimates of the number of locations are incorrect 48 percent of the time and that those inconsistencies are both over- and under-inclusive.²¹

Another important finding discussed in the *Pilot Report* is the differences in distances between rural Fabric locations in Missouri and Virginia and those locations in the Pilot that were geocoded using commercial geocoders. As shown in the *Pilot Report*, 61 percent of the geocoded locations provided by Pilot participants provided geocoded locations that were more than 7.6 meters or 25 feet away²² from the actual structure location as shown in the BSLF, and 25 percent of the time commercial geocoders place these locations more than 100 meters away from the actual structure. These are significant discrepancies because a location difference of more than 100 meters place the location in the wrong census block.²³ Misidentifying the census block compromises decision-making about government funding of those rural locations, which could lead to misapplying high-cost support and subsidized overbuilding of served areas. Indeed, in the context of the HUBB Reporting, USTelecom has pointed out these sorts of discrepancies stemming from geocoordinate variability which depend on the carrier's choice of commercial mapping vendor.²⁴

Once this harmonized dataset showing the actual physical location of all of the broadband serviceable locations is created, providers will be able to report their service availability on top of the BSLF to reveal with specificity those locations that are served and which are unserved. In its *R&O*, the Commission determined that providers should report their service areas via

²¹ See *Pilot Report* at 7 & 32-35.

²² 7.6 meters is the distance used by USAC to determine whether a CAF location in the HUBB is accurate.

²³ See *Pilot Report* at 7 & 29-31.

²⁴ See Letter from Michael Saperstein, VP – Policy & Advocacy, USTelecom – The Broadband Association, to Marlene H. Dortch, Secretary, FCC, WC Docket Nos. 19-195, 11-10, 10-90 (Aug. 20, 2019) (*USTelecom-Saperstein Aug. 20, 2019 Ex Parte*).

polygons (a.k.a. shapefiles).²⁵ The Joint Commenters believe the use of polygons as a reporting methodology is a necessary first step towards more granular data and is consistent with creating the nationwide Fabric that can serve as the foundation for all types of broadband reporting methods. However, polygons would be of limited value without the Fabric, which will contain critical information about served and unserved broadband-serviceable structures. As the Pilot demonstrates, the use of multiple types of commercial geocoders to create polygons is a barrier to getting accurate and consistent reported service availability data. The *Pilot Report* demonstrates the lack of specificity and confusion created by using multiple commercial geocoders when referring to a specific location.²⁶ Therefore, any polygons created and reported in the DODC would suffer from similar problems unless the geographic coordinates are harmonized using the Fabric as the foundation.

Eliminating Variation. The BMC has shown in multiple filings²⁷ that one of the key problems the BSLF helps to solve is inconsistent commercial geocoded data. Most commercial geocoders often correlate to the parcel centroid but not to the actual physical location of a structure, while others code to points on roads instead of parcel centroids. These different data designs are of particular importance to providers attempting to serve rural areas where, as the Pilot shows, commercial geocoders are more likely to be the most inaccurate. Information in the *Pilot Report* and other filings demonstrate that in rural areas where the parcels are often quite large, there can be hundreds of feet (if not miles) between where the geocoder places the location and where the actual physical structure exists.²⁸ This difference will lead to inconsistent

²⁵ See *R&O* at ¶ 12.

²⁶ See *Pilot Report* at 10-11.

²⁷ See *id.* at 19-22; Letter from B. Lynn Follansbee, VP – Policy & Advocacy, USTelecom – The Broadband Association, to Marlene H. Dortch, Secretary, FCC, WC Docket Nos. 19-195, 11-10, 10-90 (May 28, 2019) (*USTelecom May 28, 2019 Ex Parte*).

²⁸ See *id.*

reporting and be of paramount importance to providers attempting to make bidding decisions on service to rural locations in future high-cost program auctions.

Impact of Location Data on Commission Policy. The variance between actual locations and those found in commercial geocoders currently and will continue to impact universal service programs that lack a location fabric. For example, it could be very difficult to determine appropriate bids in an auction. Also, these variances (mostly including missing broadband serviceable structures) highlights the difficulties that some BMC members have had with reporting their locations into USAC's HUBB database. In meetings with Commission staff, BMC members continue to express their concerns about the standard for HUBB reporting that requires accuracy within four inches. This is virtually impossible to meet given the poor and varying quality of commercial geocoders.²⁹ Furthermore, geocoding locations for purposes of HUBB reporting is a daunting prospect for smaller providers that do not readily have the resources to purchase geocoding software or other datasets for such purposes. Thus, the BSLF approach could benefit HUBB reporting as well as Form 477 reporting by standardizing reporting for both reporting requirements and by eliminating unnecessary but substantial costs for smaller providers.

In addition, the data in the *Pilot Report* demonstrate how the Fabric allows a much more targeted view of served and unserved locations than a "one served-all served" approach and is needed to ensure (or reveal if) the polygon reporting is accurate. The *Pilot Report* provides an example showing results that were obtained in ten census blocks in rural Missouri using the "one served-all served" approach and what a potential polygon filing based on a Pilot participant's commercially geocoded locations running along roads with a 150 foot buffer overlaid on these

²⁹ See *USTelecom May 28, 2019 Ex Parte*; see also, Letter of Mike Saperstein, VP Law & Policy, USTelecom to Marlene H. Dortch, Secretary, FCC, WC Docket No. 10-90 (Mar. 28, 2019); *USTelecom-Saperstein Aug. 20, 2019 Ex Parte*.

census blocks.³⁰ Comparing those polygons with the Fabric locations associated with the addresses used to create the polygons demonstrates how polygons based on poor geocoded maps could misrepresent broadband serviceable locations. Importantly, this shows that ultimately polygons are only as good as the data used to create them. In contrast, the Fabric reveals structure details of both the served locations *and* the underserved locations in the census blocks. The *Pilot Report* shows that most of the unserved locations are in the eastern half of these ten census blocks – locations that may not have been seen by providers.³¹ The clusters of unserved locations shown in the report reveal an example of where service is not available, and thus would provide insightful and accurate information for future broadband deployment. This is one of the key reasons that the Joint Commenters support the creation of the BSLF in parallel with creation of a polygon-based portal.³² Also, there is no reason to create two different datasets (one with polygons alone and one with polygons merged with the BSLF) or two different processes with potentially differing metrics and results. We have shown through the Pilot process that the BSLF can be created nationwide in an efficient, cost-effective and scalable way.³³

Public Access to the Fabric. The Commission asks whether the national BSLF should be publicly accessible.³⁴ When the BMC created the BSLF for the Pilot, we contemplated that the resulting information concerning the location of broadband serviceable locations would be viewable by the public, so that crowdsourcing or look-up capabilities would be available to consumers seeking to determine which providers serve their home or business. Because the

³⁰ See *Pilot Report* at 9-10. This is just one example of how a polygon could be created using currently available geocoding methods.

³¹ See *id.* at 12.

³² See *2nd FNPRM* at ¶ 110.

³³ See *Pilot Report* at 13.

³⁴ See *2nd FNPRM* at ¶ 111.

Commission has stated that it wants to include crowdsourcing as part of this effort,³⁵ it is hard to imagine how crowdsourcing could possibly be effective without some public disclosure of the BSLF and reported data.

In the *Pilot Report*, CostQuest estimates the cost of the BSLF using some proprietary data versus all open source data.³⁶ Creating the BSLF using proprietary data would result in a superior product at a lower estimated cost (\$8.5-\$11 million) and would allow for public viewing with the following caveat – while information on the location of broadband serviceable locations would be viewable, *the entire dataset* would *not* be available for download by the public. The estimated cost of the completely open source data BSLF is estimated to cost twice as much, in part because it would rely on the visual verification of more records in order to get to the same level of confidence and accuracy and would be more difficult to update.³⁷ As such, we support the Commission’s creation of the nationwide BSLF using proprietary datasets. This would still allow the BSLF to be publicly accessible but without the underlying data used to inform the BSLF being accessible to the public (but available to the Commission and other government agencies as appropriate).

B. Inconsistencies In Location Definitions Must Be Resolved

Regarding the determination of which locations should be defined as “serviceable,” the Joint Commenters agree with the Commission that recording each location as a single point has an advantage over reporting the outlines of each building. Reporting building outlines would increase the complexity of the database without meaningfully improving its quality.³⁸ However, the Commission correctly points out that there may be multiple buildings on a parcel and

³⁵ See *R&O* at ¶ 20.

³⁶ See *Pilot Report* at 13.

³⁷ See *id.*

³⁸ See *2nd FNPRM* at ¶ 103.

questions whether it would be advisable to treat each of those buildings as a distinct location.³⁹ This proposal would account for the likelihood of a provider running a single connection (drop) from its network to, for example, a farm, rather than individual connections to all of the structures on the parcel (*e.g.*, the farmhouse and each garage, barn, chicken coop, or storage shed).⁴⁰ Because fixed service is deployed with multiple technologies, the use of a drop does not always apply, the Commission could follow the Pilot example by selecting the “primary structure” on a parcel as the initial broadband serviceable location until such time as information about secondary structures can be understood and public policy decisions necessitate including them.⁴¹

The Commission also asks specifically how it should treat database errors that may incorrectly count a structure such as an abandoned house or a shed that does not need a broadband connection as a broadband-serviceable location and/or incorrectly exclude locations such as a home in a heavily forested area that does not appear on satellite imagery.⁴² The BMC addressed these issues in the Pilot. One of the best benefits of utilizing multiple datasets to create the BSLF is that the underlying datasets check each other to collectively help inform what constitutes a broadband-serviceable location. By starting with satellite imagery, the Fabric was populated with all of the structures in a parcel . We then progressively filtered out secondary structures as not serviceable based on land attribute data provided in other datasets. By including visual verification for structures whose purpose or use is unclear, the level of precision or assurance about whether certain structures are truly viable broadband-serviceable locations was improved. And, as the BMC demonstrated in one of its “early view” filings on the Pilot results,

³⁹ *See id.* at ¶ 101.

⁴⁰ *See id.*

⁴¹ For purposes of the BMC’s Pilot, CostQuest maintained the records of those secondary structures so that they could be added back in if deemed necessary.

⁴² *See 2nd FNPRM* at ¶ 104.

locations in deeply wooded areas which were previously unidentifiable were identified and included in the Fabric.⁴³ All of this points to how utilizing the BSLF methodology will improve confidence to provide a truly superior foundation for measuring broadband location reporting.

The BMC's *Pilot Report* includes lessons learned from the Pilot as well as the request that the Commission clarify the definition of a "location," including the requirements for the assignment of structures to residential and business categories. This is a critical step to ensure that datasets can be appropriately selected and calibrated. The Commission has teed up this question – what "kind of locations" are broadband serviceable locations⁴⁴ and, as it pertains to creating the BSLF, what *types of structures* are we looking for in creating the BSLF?

The Commission should build on its existing guidance in CAF programs to take a clear position on this issue as it has important implications for a number of Universal Service Fund ("USF") proceedings.⁴⁵ The Commission must set a common location definition for use across its fixed service USF programs that have reporting and/or buildout obligations to ensure consistency and to enhance accuracy across the board. We believe that the Commission's 2016 guidance should serve as the starting point for the current inquiry.⁴⁶ Because current rural

⁴³ See *See USTelecom May 28, 2019 Ex Parte*.

⁴⁴ See 2nd FNPRM at ¶ 101; Public Notice, *Wireline Competition Bureau Announces Delay in Initiation of The CAF Phase II Auction Eligible Locations Adjustment Process*, DA 19-784 (Aug. 19, 2019) ("CAF II Locations Discrepancies Deferral Auction Public Notice") at 4.

⁴⁵ The Commission is considering this in the context of its various locations discrepancies proceedings and declaratory ruling requests filed by rate-of-return carriers. See, e.g., *CAF II Locations Discrepancies Public Notice*; Public Notice, *Wireline Competition Bureau Issues Corrected Alternative Connect America Model II Offers to 37 Companies, Extends the Election Deadline, and Seeks Comments on Location Adjustment Procedures*, WC Docket No. 10-90, Public Notice, DA 19-504 (rel. June 5, 2019); *Petition for Clarification or Declaratory Ruling on the Definition of Location for Home Offices Under the Connect America Fund – Alternative Connect America Cost Model*, WC Docket No. 10-90 (filed May 6, 2019); Public Notice, *Comments Sought on Petition for Declaratory Ruling of Northeast Telephone Company and Western Iowa Telephone Association*, DA 19-579, (Jun. 20, 2019) ("Northeast Iowa Declaratory Ruling Petition").

⁴⁶ See Public Notice, *Wireline Competition Bureau Provides Guidance to Carriers Receiving Connect America Fund Support Regarding their Broadband Location Reporting Obligations*, DA 16-1363 (Dec. 8, 2016) ("December 2016 PN").

broadband experiment, CAF and A-CAM recipients are already relying on this guidance for purposes of HUBB reporting, using the *December 2016 PN* would be an appropriate starting point to baseline reporting to promote consistency. However, informed by the Pilot process and the experiences of those high-cost recipients that are already required to report, the existing guidance will require some revisions to resolve inconsistencies and avoid confusion. For example, the *December 2016 PN* states that “housing units” are “defined by the Census Bureau as living quarters in which the occupant or occupants live separately from other individuals in the building and have direct access to their living quarters from outside the building or through a common hall.”⁴⁷ It then goes on to note that the Census Bureau does not classify group quarters such as dormitories or nursing homes as housing units and directs filers to exclude group quarters from their reporting.⁴⁸ Broadband is desired, and in some cases necessary, to those living in group quarters such as students and service members. Similarly, the guidance excludes nursing homes and mobile homes although they clearly are the primary residences for many, if not all, of their occupants. Excluding group quarters, nursing homes and mobile homes is outdated. As another example, the Census Bureau’s definition states that “[t]ents and boats are excluded if vacant,” but the *December 2016 PN* states that tents and boats should not be reported at all, whether vacant or occupied.⁴⁹ Another issue is that identification of certain “housing units” requires the reporting provider to derive intent – “housing units” includes “quarters in predominantly transient hotels, motels, and the like, except those occupied by persons who consider the hotel their usual place of business.” Reporting this information unreasonably requires the provider to determine the resident’s intent – what it “considers.” One aspect of the location guidance even appears to incorporate subscribership information not deployment data.

⁴⁷ *Id.* at 4.

⁴⁹ *Id.* at 6.

As the Northeast Iowa Declaratory Ruling Petition points out, the guidance provided by the Commission requires reporting of a business “for a carrier to count a business run out of a house or a business run out of a barn, shed or other structure on the property, there must be separate facilities . . . *and the business must separately subscribe (get its own bill).*”⁵⁰ As these examples illustrate, the Commission must not only update but must also make clear and consistent its definition of a location across all open proceedings it now has before it. The Joint Commenters look forward to the opportunity to work with the Commission further on this issue.

The Commission specifically asks about residential Multi-Tenant Environments (“MTEs”) and whether the approach to treat each building as a single location is acceptable.⁵¹ The Joint Commenters disagree with this approach. MTEs often contain ground floor retail establishments with apartments or other residential housing on upper floors. In these sorts of mixed-use environments, it seems clear that each unit should be treated as a single location, much like the current guidance to treat apartments as individual locations.⁵² The existence of retail use mixed in with residential use should in no way impact the location status of the residential units within the MTE.

That said, while the Joint Commenters anticipate the BSLF will create a much clearer picture of the number of locations in a given census block and reporting will improve as a result, changing the rules for existing CAF and A-CAM recipients that are already reporting locations in the HUBB could impose massive burdens. The Commission appears to have acknowledged this in its discussion of possible methods of correcting data.⁵³ The potential burden on HUBB filers could be very high; therefore, the Joint Commenters do not support the Commission reviewing

⁵⁰ See generally Northeast Iowa Declaratory Ruling Request (emphasis added).

⁵¹ See 2nd FNPRM at ¶ 102.

⁵² See December 2016 PN.

⁵³ See 2nd FNPRM at ¶ 94.

every latitude/longitude submitted in the HUBB to see if they meet the “new” definition of “location,” but we do support the Commission providing the opportunity for providers to voluntarily true up their locations if they determine that doing so would improve their internal recordkeeping in a cost-effective manner.

C. Utilizing the BSLF As A Foundation For Reporting Is a Cost-Effective Way To Improve Accuracy

In addition to increasing granularity, the Commission’s other stated goal is to improve the accuracy of available data.⁵⁴ The Joint Commenters support this goal and are confident that the harmonized set of locations generated by the BSLF will be accurate. It is important to understand, however, that because a dataset such as the BSLF has never been created, 100 percent accuracy at the outset is unrealistic. That said, the Joint Commenters believe that using the BSLF methodology, including a managed visual review process, will produce a highly reliable and accurate initial set of locations. Of course, the initial BSLF will be subject to future updates and, importantly, more accurate reporting by broadband providers will increase as a result.

In advocating for the creation of the BSLF, the BMC has repeatedly indicated that it views the BSLF as a “living dataset” that would be revised at least annually with updated underlying data sets showing new locations and deleting those that are torn down. In addition, as the Commission suggests,⁵⁵ other available datasets, such as the upcoming 2020 Census Bureau data could be used to maintain and improve accuracy.⁵⁶ Additionally, the Joint Commenters support USAC taking a statistically valid sample of the data points as a way to keep the database

⁵⁴ *See id.* at ¶ 104.

⁵⁵ *See id.* at ¶ 105.

⁵⁶ 2020 Census Bureau data would be useful in providing updated housing unit figures for MTE locations but would not be useful as an overall metric because Census Bureau data does not use the term “locations” and does not include small businesses.

updated and accurate,⁵⁷ as proposed by the Commission.⁵⁸ The use of additional datasets in this way could ensure that the BSLF is continually verified and improved so that it is up-to-date for future broadband deployment and support mechanisms.

As we describe in more detail herein, following USAC verification of the BSLF data, there should be an opportunity for a managed crowdsourcing process to aid consumers and others in providing suggested edits or improvements both to the Fabric and the providers' reported data. We also consider a look-up tool, as suggested by the Commission,⁵⁹ to be a useful means to continually improve the BSLF. The Commission asks how USAC can ensure the accuracy of a look-up function.⁶⁰ As discussed above, one of the principal benefits of creating the BSLF is that it will be standardized using a single geocoding methodology, and that should eliminate current problems with the use of multiple commercial geocoders. This standardized geocoding will make the identification of precise locations easier and accuracy will naturally be improved. Furthermore, if BSLF geocoded locations are used in the creation of polygons, the database will be significantly more accurate because all providers will develop their report using consistently defined georeferenced database.

In the *2nd FNPRM* the Commission asks what the costs of implementing this new type of reporting will be on the fixed broadband industry.⁶¹ At the outset, it is important to note that the costs associated with creating the BSLF are not impacted by the technology deployed or the size of the fixed provider. The Pilot has successfully demonstrated that this concept works. It is time

⁵⁷ See Letter from James W. Stegeman, President/CEO, CostQuest Associates, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 11-10, Attach. at 15-16 (filed Nov. 16, 2018) (describing "Managed Visual Review ... a process of using various managed human resources... to visually inspect, and/or review specified data.").

⁵⁸ See *2nd FNPRM* at ¶ 106.

⁵⁹ See *id.* at ¶ 108.

⁶⁰ See *2nd FNPRM* at ¶ 108.

⁶¹ See *id.* at ¶ 82.

for the Commission to move forward to create the nationwide BSLF. No provider data is required to create the initial BSLF database. However, the process could be improved significantly if providers were given the opportunity to submit their address databases to help with the verification stage of the Fabric creation and a location ID is associated with the providers' address for future reference. This could significantly assuage any cost and resource burdens on providers in moving to a new type of reporting, particularly for small companies that may not have the same level of technological resources as larger providers.⁶² Moreover, the Joint Commenters support the Commission allocating and/or providing resources to help small providers prepare their polygon filings so that they can be properly anchored to the BSLF.

Another way to ensure that the burden of reporting via polygons is minimized is to submit their polygons in conjunction with the June 30th and December 31st Form 477 certification deadlines. In the *R&O*, the Commission decided that after the initial DODC reports are due, “[f]ixed providers also must submit updates within six months of completing new broadband deployments; making changes to (including upgrading or discontinuing) existing offerings; or otherwise acquiring new, or selling existing, broadband-capable network facilities that affect the data submitted on their DODC filings.”⁶³ The Commission also determined that “[f]ilers must additionally certify on or before June 30 of each calendar year that as of December 31 of the previous year, all of the filer’s service availability data continues to be accurate, taking into account the filer’s data that has been updated during the calendar year.”⁶⁴ These requirements assume that providers will be reporting data on an incremental basis to update information previously reported. This type of reporting is highly problematic for providers with

⁶² Locations with providers’ ID number are easier to authenticate, are more likely to have accurate / harmonized GIS coordinates and reduces the many complexities or burden of creating polygons.

⁶³ See *R&O* at ¶ 16.

⁶⁴ See *id.*

large amounts of data to report, for whom reporting within six months of new deployments would leave them in the position of having to report on a nearly continual basis, leading to not only an increased burden for providers but also for USAC in having to accept a constant flow of new data. Instead, providers should be permitted to simply file new polygons (reflecting new builds and any changes) to fully replace the previously-reported polygons every six months.

The BMC supports USAC acting as the administrator of this data collection with appropriate oversight by the FCC and its Bureaus, as the Commission has proposed.⁶⁵ However, as the BMC previously recommended in this proceeding,⁶⁶ it is extremely important for USAC to provide clear opportunities for stakeholder input into the development of both the shapefile portal and the “crowdsourcing” intake process. Based on our members’ previous experience with USAC’s creation of the HUBB portal, many difficulties with its use could have been resolved in advance. Thus, we strongly urge the Commission to adopt a clear and transparent process for stakeholder input on the front end of the creation of these rules, procedures, and portals.

III. THE COMMISSION SHOULD IMPLEMENT IMPROVED DATA COLLECTION WITH MINIMIZED REPORTING BURDENS

As the BMC’s initiative in developing the Pilot Fabric illustrates, the Joint Commenters strongly endorse the Commission’s efforts to implement an improved broadband data collection regime.⁶⁷ The geospatial data reporting that the Commission envisions will provide more accurate deployment data, especially in rural areas – the parts of the country that are most in need of improved data reporting and universal service support. In adopting new standards,

⁶⁵ See *2nd FNPRM* at ¶ 99.

⁶⁶ See Letter from B. Lynn Follansbee, VP – Policy & Advocacy, USTelecom – The Broadband Association, to Marlene H. Dortch, Secretary, FCC, WC Docket Nos. 19-195, 11-10, 10-90 (Jul. 22, 2019).

⁶⁷ See *R&O* at ¶¶ 3 & 4.

however, the Commission should take particular care to avoid imposing undue burdens on the broadband providers subject to the new reporting requirements. The core objective of gathering more detailed and accurate data regarding broadband deployment can only be achieved if the process of collecting and reporting that data is sufficiently simplified and streamlined such that all providers, particularly smaller companies serving rural areas, can report their data easily, accurately and at reasonable cost.

A. The FCC Should Adopt Standard “Safe Harbors” For Polygon Reporting

The Commission seeks information concerning appropriate reporting standards for both fixed wired and fixed wireless broadband service providers.⁶⁸ The complexity of acquiring and presenting broadband coverage data strongly supports the establishment of standardized “safe harbors” for fixed services applicable to the different technologies deployed to set a “baseline” methodology that providers can use, while also affording providers with the flexibility to utilize other methodologies most appropriate to their network. There are significant differences in deployment and technology between mobile wireless and fixed broadband services, and these suggest a compelling need to establish “safe harbors” applicable to wireline service providers.⁶⁹

For fixed wireline service availability, the Commission should establish “safe harbors” based on an appropriate buffer zone related to the density of the geographic area in creating that polygon and also provide flexibility in the types of polygons a provider can create based on the technology used to provide service. For example, one fixed wireline provider may seek to create a polygon based on the specific locations it can serve, creating what is akin to a string of pearls,⁷⁰

⁶⁸ See 2nd FNPRM at ¶¶ 79 & 80.

⁶⁹ The same holds true for fixed wireless broadband services. BMC members WISPA and AT&T each plan to file separate comments addressing fixed wireless polygon issues.

⁷⁰ See Testimony of James W. Stegeman, President of CostQuest Associates, Before the Subcommittee on Telecommunications and Technology, United States House of Representatives (Sep. 11, 2019) at Appendix E.

whereas another wireline provider, may choose to create polygons based on road segments that align with where their facilities are based.⁷¹ Both are reasonable ways to demonstrate service areas. This flexibility is particularly important given that the Commission has adopted a definition of service availability for fixed wireline service such that a polygon must report that the provider either has a broadband connection or could provide a broadband connection within ten business days of a request to “*every end-user location*” within the polygon.⁷²

Regardless of the actual method of creating the “shape” of the shapefile – pearl or road segment or other justifiable method – the Commission should establish process to ensure that the buffers a provider selected would only include areas where broadband service can be reasonably activated within the proposed ten days of a request, if the location was not already served. This is necessary to maintain a level of uniformity and comparability.

B. There Is No Reasonable Basis For, Or Potential Benefit To Be Gained From Requiring All Providers To Report Latency Data

One characteristic that the Commission should exclude from the DODC reporting requirements is transmission latency. The Commission specifically seeks comment on this suggestion, inquiring broadly “whether fixed broadband providers should include latency levels along with the other parameters in reporting their coverage polygons.”⁷³ The costs and complexities of including latency as part of this data collection would far outweigh any benefit to be gained from attempting to collect this data from broadband providers.

As a threshold matter, while latency for some services can be a factor in service quality, (particularly for voice service and broadband provided via satellite), the Commission has concluded that latency is not a factor that helps determine whether broadband service is

⁷¹ See *id.*

⁷² See *R&O* at ¶ 13 (emphasis added).

⁷³ See *Id.* at ¶ 81.

available. In the 2019 *Broadband Deployment Report*, the Commission stated that:

as the Commission found in the 2018 Report, “[a]pplying a latency benchmark for all broadband services, whether fixed terrestrial, satellite, or mobile broadband, that would exclude from our section 706 analysis any consideration of broadband services that, on their face, would appear to provide consumers with the relevant capabilities articulated in section 706(d)(1), would prevent a reliable or complete assessment of the deployment of advanced telecommunications capability.”⁷⁴

The Commission concluded by stating that considerations such as latency “do not affect the underlying determination of whether *advanced telecommunications services* capability has been deployed and made available to customers in a given area.”⁷⁵ Accordingly, requiring collection of latency data would not appear to serve any statutory purpose. Further, as a practical matter, the Commission itself provides no background explanation of any public policy objective that would be served by requiring all broadband providers to measure and report latency.

At the same time, the costs of implementing such a reporting requirement would likely be extremely burdensome, especially for small providers. To date in this proceeding, neither the Commission nor any party has offered any criteria, including methods, scope or other details, that would permit even a rudimentary cost-benefit analysis to assess the value of reporting latency versus potential benefits.

Broadband providers, particularly those not receiving universal service subsidies where reporting latency is required to determine compliance with performance requirements, should not be forced to become a testing sub-agency for the Commission, particularly given its finding that latency does not affect the underlying determination of whether broadband is available. CAF applicants understood both the speed and latency parameters to be a basis for distinguishing among multiple applicants seeking grant of federal support to deploy new broadband service. With respect to testing requirements imposed to validate these characteristics, CAF participants

⁷⁴ 2019 *Broadband Deployment Report* at 3865 ¶ 19 (citations omitted).

⁷⁵ *Id.* at 3866, ¶ 19.

are able to rely on the support they receive to fund it. Adding arbitrary latency reporting for other broadband service providers would impose an unfunded mandate, with limited corresponding benefits, if any.

The CAF latency measurement process itself illustrates that developing an acceptable latency measurement standard is a very complex undertaking. The July 2018 Commission staff order establishing speed and latency testing, measurement and reporting for CAF recipients has entailed an initial order, reconsideration petitions, applications for review, and lengthy rounds of meetings and *ex parte* presentations addressing the appropriate testing frequency for latency, the testing “loop” to establish the test and other compliance measures.⁷⁶ That complexity would be amplified in the case of the broader service offerings subject to DODC reporting, where there may be many tiers of service to test, as opposed to a particular level of service that qualifies for a CAF subsidy. Moreover, thousands of additional providers – those that do not receive high-cost funding – would be subject to the new requirement. Mandating the inclusion of latency data in such circumstances would create new and potentially unwarranted challenges from consumers who may attempt to measure latency over a unique delivery path because they are unfamiliar with Commission requirements or lack the understanding that a service provider has to measure on a holistic basis across the entire network. Therefore, the Commission thus should not require broadband providers to submit latency information.

C. Service Providers Should Not Be Penalized For Submitting Inaccurate Data Absent Clear Evidence Of Intentional Or Persistent Misreporting

The Commission also seeks comment on appropriate penalties where a provider submits inaccurate data, and asks whether “there should be more severe penalties for chronic filers of bad

⁷⁶ See *Connect America Fund*, 33 FCC Rcd 6508 (2018).

data.”⁷⁷ The Commission should not implement a reporting regime that penalizes reporting entities for errors in their data unless it is demonstrated that such errors are the result of willful misrepresentation or repeated negligence in the gathering or presentation of data. In this regard, the Joint Commenters concur with ACA’s observation that there should be no sanctions on entities reporting data “unless there is clear evidence that the provider intentionally and persistently did so.”⁷⁸ Reporting entities that make a good faith effort to comply fully and carefully with reporting obligations should not be sanctioned if their data proves to be flawed in some way, provided that any errors may be quickly and appropriately addressed. This consideration is especially critical the case in the early stages of implementation of a new and untested reporting regime.

On a more long-term basis, avoiding a “strict liability” approach to data reporting properly distinguishes between those entities that make a conscientious, good faith effort to provide accurate data and those that fail to take their reporting obligations seriously or affirmatively manipulate the data being reported. A more forgiving approach also encourages providers to submit their data promptly rather than delaying submission for fear of making a costly error. As discussed below, members of the public that challenge information submitted by service providers should be required to comply with reasonable *prima facie* submission criteria to ensure that the public crowdsourcing process does not unnecessarily or unreasonably burden providers with vaguely articulated and/or unsubstantiated claims. Indeed, Commission staff may be able to resolve some challenges based on the initial evidence presented without the need for a service provider to submit a formal response.

Promoting largely risk-free reporting could also facilitate a more iterative, accretive

⁷⁷ See 2nd FNPRM at ¶ 83.

⁷⁸ See *id.*

process wherein providers are permitted to supplement data as warranted to achieve greater accuracy and completeness. Such an approach would be especially helpful to small service providers that may lack in-house mapping, GIS and RF planning resources that larger providers typically have.

D. Maps And Datasets Should Have Uniform Characteristics To The Maximum Extent Possible

The Joint Commenters agree with the Commission that the DODC “represents a unique opportunity for integrating related but distinct data resources to produce a unified picture of broadband data.”⁷⁹ Given the need for standardization and consistency among datasets and deployment profiles across all sections of the country, it would make no sense for different reporting programs involving broadband deployment to rely on different types of maps and dataset formats. Relying on common metrics will produce multiple benefits, including precluding the potential opportunity for subsidy applicants to “double-dip” by using distinct data to obtain duplicative support from different subsidy programs. This consistency, in turn, will prevent subsidized overbuilding, protect (and thereby encourage) private investment, and enable universal service support to be more efficiently targeted and used.

IV. THE COMMISSION SHOULD CAREFULLY CRAFT ITS PUBLIC CHALLENGE REGIME

In the *R&O and 2nd FNPRM*, the Commission directed USAC to initiate a “crowdsourcing” process, whereby USAC will collect input from state, local, and Tribal governmental entities, as well as members of the public, regarding the accuracy of broadband coverage data submitted by fixed providers.⁸⁰ As envisioned by the Commission, this public feedback process will furnish valuable “input from the people who live and work in the areas that

⁷⁹ See *2nd FNPRM* at ¶ 84.

⁸⁰ See, e.g., *id.* at ¶ 3.

a service provider purports to serve [and] also play[] a vital role in ensuring the quality of [broadband coverage] maps, helping to identify areas where the data submitted do not align with the reality on the ground.”⁸¹ In this regard, crowdsourcing is designed to further verify the validity of broadband deployment data.⁸²

Against this backdrop, the Joint Commenters remind the Commission that the crowdsourcing mechanism, as well as related challenge processes, is a public input opportunity designed to foster the goal of improving broadband mapping. Conceptually, the public input the Commission is seeking to this end is not “complaints.” Yet, while the Joint Commenters can understand the benefit of some analogies to the Commission’s consumer complaint *process* to help inform a crowdsourced challenge process, the *R&O and 2nd FNPRM* unnecessarily drifts into referring to the challenge process as a “complaint” process.⁸³

The difference in terminology is meaningful. As discussed below, the Joint Commenters strenuously object to any USAC “mission creep” into resolution of legitimate broadband coverage disputes. Re-branding the public feedback process into informing accuracy of broadband data and maps exclusively as “crowdsourcing” and/or a “challenge process” will help remind the Commission, Commission staff, and USAC of the avowed purposes of crowdsourcing, as discussed above, as well as the proper bounds of USAC’s role in administering it.⁸⁴

⁸¹ *Id.* at ¶ 18; *see also id.* at ¶ 11.

⁸² *See id.* at ¶ 24.

⁸³ The *R&O and 2nd FNPRM* contains 25 references to “complaint,” “complaints,” or “complainant.” Two are found within its Initial Regulatory Flexibility Analysis; two are found in the Statement of Commissioner O’Rielly, in the course of arguing for the cabining of the use of crowdsourcing in some respects; and the remaining 21 all appear, ironically, within a section of the *R&O* captioned “Use of Crowdsourcing.”

⁸⁴ *Cf., e.g., id.* at Appendix. A, Final Rules, § 1.7001(d)(2)(ii)(C) (Commission will release to the public “[l]ocation information that is necessary to permit accurate broadband mapping, *including crowdsourcing or challenge processes*”) (emphasis added); Broadband DATA Act, H.R. 4229, 116th Cong. § 3(b)(5)

A. The Challenge Process Should Focus On The Outcome Of Improving Broadband Coverage Data And Maps In A Manner That Minimizes The Burdens On Providers

The 2nd FNPRM proposes that USAC track coverage disputes, follow-up with providers to ascertain whether there is agreement that there is a problem with the data, and ensure that providers timely refile updated and corrected data.⁸⁵ It also proposes to require that individuals disputing coverage certify that they have requested service from the provider and that the provider either refused or failed to provide service within the applicable 10-business day period.⁸⁶ The Joint Commenters urge a challenge process that emphasizes improving broadband coverage data and maps over punishing providers for inaccuracies, limiting USAC's role to a ministerial one, and minimizing the burdens on providers.

Process Mechanics. The Joint Commenters support the first two prongs of USAC's proposed role in the challenge process, namely, that USAC track coverage disputes and follow up with providers. The Joint Commenters particularly highlight the 2nd FNPRM's proposed procedure of notifying providers regarding challenges,⁸⁷ but only after USAC has confirmed that the challenge is valid and a provider's data may require change. In this regard, the Joint Commenters oppose the potential alternative method described in the 2nd FNPRM under which USAC would require providers to check periodically for challenges to their data.⁸⁸ This alternative could substantially increase provider burdens, especially for smaller providers, and in so doing, create an atmosphere more conducive to challenges slipping through the cracks. This,

(2019) ("Challenge Process" subsection of bill relating to the collection of data with respect to the availability of broadband services).

⁸⁵ See 2nd FNPRM at ¶ 89.

⁸⁶ See *id.* at ¶ 91.

⁸⁷ Cf. FCC, Consumer Complaint Center, <https://consumercomplaints.fcc.gov/hc/en-us> (last visited Sept. 18, 2019) ("If your complaint is about a telecom billing or service issue, we will serve your complaint on your provider.").

⁸⁸ See 2nd FNPRM at ¶ 89.

in turn, would escalate consumer frustration, entail Commission staff intervention in dispute resolution in instances where it could have been avoided and, worst of all, inhibit or delay improvements to broadband coverage data and maps.

The 2nd *FNPRM* also proposes that USAC “ensure that providers refile updated and corrected data in a timely fashion,”⁸⁹ but then seeks comment on the “appropriate time period (if any) for fixed providers to respond” to a challenge. The Joint Commenters agree with ACA that it would be onerous if a smaller provider had to respond immediately to each and every submission.⁹⁰ However, such a procedure would be no less onerous for larger providers and the Joint Commenters therefore support this approach regardless of which provider’s data is challenged. Similarly, the Joint Commenters concur with NTCA that crowdsourced reports should not be treated the same as consumer complaints, *i.e.*, they do not require the provider’s response in all cases.⁹¹

The Joint Commenters also agree with ACA⁹² and NCTA⁹³ that providers should be permitted to correct any inaccurate data at their next filing opportunity.⁹⁴ Having a fixed and known schedule for data updates and enabling providers to avail themselves of efficiencies in submitting batch data corrections best balances the need for data corrections against the burdens to which providers otherwise would be subject with an unbounded or more frequent data update

⁸⁹ *Id.*

⁹⁰ *See id.* at ¶ 90.

⁹¹ *See id.* at ¶ 95. In this regard, the mechanism USAC creates to track challenges need not – and should not – track provider responses to challenges. *But see id.* at ¶ 89 (envisioning tracking system to include tracking whether the individual filing the challenge received a response). Instead, it should be geared towards verifying, where appropriate, that providers refile updated and corrected data at the pertinent time.

⁹² *See id.* at ¶ 90.

⁹³ *See id.* at ¶ 93.

⁹⁴ The Joint Commenters emphasize that providers should be “allowed” to file updates on this schedule but not *required* to wait that long to submit updates where providers would rather do so more frequently.

requirement.⁹⁵ In fact, providers already are required pursuant to the *R&O* to submit data on deployment and service updates within six months, and the Joint Commenters can discern no reason why updates based on challenge processes would be any more compelling or urgent.⁹⁶ Notably, the *R&O* specifies that “[f]ilers could generally batch their changes together in six-month increments, resulting in two updated filings per year—effectively the same burden as for Form 477 filers.”⁹⁷ While the filing frequency burdens on providers thus will remain the same in the DODC context as they have been with Form 477, the key distinction between such updates is that with the DODC, the data changes should be processed almost instantaneously, while with the Form 477, those changes typically are not reflected for over a year.⁹⁸ Therefore, batching updates in the manner and on the schedule proposed by ACA and NCTA will lead to much more rapid availability of updated data than is currently the case, without wastefully imposing upon providers greater filing frequency requirements than those to which they are currently subject.⁹⁹

⁹⁵ See *id.* at ¶ 93.

⁹⁶ Similarly, the Joint Commenters cannot perceive any compelling reason for the Commission to require the provider to backfile earlier reports where the challenge process determines the coverage data are incorrect. The only circumstance under which the *R&O* obligates providers to file more frequently than within six months is when “they discover a significant reporting error in the original broadband deployment data that they submit.” See *R&O* at ¶ 16. While this would entail updating their “original broadband deployment data,” it is not clear that the requirement encompasses “resubmi[ssion of] all earlier datasets for the affected areas to conform to any corrections.” But cf. *2nd FNPRM*, at ¶ 94 (seeking comment on whether following corrections to broadband coverage polygons, the Commission should require providers to resubmit all earlier datasets for the affected areas to conform to any corrections). Similarly, there is no apparent reason why corrected polygons based on the challenge process – whether or not the previous rendering’s erroneousess was “significant” – should compel a revision of “all earlier datasets” when there is no indication in the *R&O* that it is required in the case of “significant reporting error[s]” that providers themselves discover. Of course, providers would be obligated to correct the data in the Fabric as well as associated mapping going forward. And, as with the frequency of filing updates, providers should be *allowed* to backfile corrected data, but not required to do so, as the burdens of doing so could be substantial without indication of any associated benefit.

⁹⁷ See *R&O* at ¶ 16 n.32.

⁹⁸ See, e.g., Public Notice, *FCC Releases Form 477 Data on Broadband Deployment as of June 30, 2018*, DA 19-897 (OEA Sept. 10, 2019).

⁹⁹ In this regard, the Joint Commenters respond resoundingly in the affirmative to the *2nd FNPRM*’s question whether it would be overly burdensome for fixed providers to re-file data addressing each individual error. See *2nd FNPRM* at ¶ 93.

USAC Role. In attempting to delineate the role of USAC in administering a challenge tracking mechanism, the *R&O* and *2nd FNPRM* specify that USAC will, among other things, verify broadband deployment data as part of the DODC,¹⁰⁰ and bring *uncontested* challenges to closure.¹⁰¹ While these functions are reasonable and to be expected as part of an administrative role, the *2nd FNPRM* throws some uncertainty into the mix by suggesting that USAC may play a part in adjudicating conflicting claims¹⁰² and “resolv[ing] disputes involving bulk [challenges] in the same manner as individual [challenges].”¹⁰³

A footnote in the *2nd FNPRM* states that “while USAC will be in charge of establishing the online portals . . . the relevant Commission Bureaus are charged with directing USAC on how to implement the new collections.”¹⁰⁴ Nevertheless, there are enough potentially contradictory suggestions of what USAC’s role will be that it warrants Commission clarification. Specifically, the Commission should clarify that USAC will not engage in resolving, and has no authority to resolve, challenge process disputes. Although USAC does perform limited adjudicatory functions in addressing appeals of its own funding decisions submitted by the aggrieved party, it is not a tribunal empowered to resolve, nor experienced in resolving, parties’ competing claims.

In his statement on the *R&O* and *2nd FNPRM*, Commissioner O’Rielly referenced “USAC’s purely ministerial role in adjudicating conflicting claims.”¹⁰⁵ While perhaps an encouraging sign of substantive limits on any adjudicatory functions USAC could perform in this realm, it still begs the question of the scope of this role. Commissioner Rosenworcel similarly

¹⁰⁰ See *R&O* at ¶ 29; *2nd FNPRM* at ¶ 83.

¹⁰¹ See *2nd FNPRM* at ¶ 93.

¹⁰² See *id.* at ¶ 95.

¹⁰³ *Id.* at ¶ 98.

¹⁰⁴ *Id.* at ¶ 76 n.228.

¹⁰⁵ *Id.* at Statement of Commissioner Michael O’Rielly.

raised concerns about USAC's potential role developing and running the DODC, and posed the critical question: "How will they be accountable to the public?"¹⁰⁶ The Commission must not abdicate its own adjudicatory function with respect to the challenge process.

There are, however, certain functions with which USAC should be empowered in this role, that it has not been in administering the HUBB portal nor in other contexts. Joint Petitioners individually have been working actively with USAC in an effort to address numerous difficulties with HUBB reporting.¹⁰⁷

In one example of such difficulties, a provider made its required HUBB filing of deployed locations from the prior year, but as it turned out, the HUBB was experiencing technical issues at the time of the provider's filing, and, unbeknownst to the provider, such issues caused the certification of the filing to vanish, with the effect of it appearing as if the provider had not completed the filing.¹⁰⁸ A year later, the provider was penalized with USF support withholding on account of late filing even though it had not. According to USAC, it does not possess the authority to waive penalizing the provider for what amounts to a USAC system issue that was out of the provider's control, and a formal waiver request therefore had to be filed with the Commission,¹⁰⁹ necessitating considerable extra expense and time towards an effort to recover funds that never should have been withheld in the first place.¹¹⁰ These unnecessary burdens – and how they could have been eminently avoidable – illustrate precisely the type of authority USAC *should* enjoy in this process, namely, to be empowered to resolve technical

¹⁰⁶ *Id.* at Statement of Commissioner Jessica Rosenworcel, Approving in Part, Dissenting in Part.

¹⁰⁷ *See, e.g.*, Letter of Mike Saperstein, VP Law & Policy, USTelecom to Marlene H. Dortch, Secretary, FCC, WC Docket No. 10-90 (Mar. 6, 2019).

¹⁰⁸ *See* Blackfoot Telephone Cooperative, Inc. and Fremont Telcom Company Request for Limited Waiver of March 1, 2018 Deadline for Certifying Broadband Locations in the High Cost Universal Broadband System for Alternative Connect America Cost Model Funding, WC Docket No. 10-90 (filed Apr. 25, 2019) (Blackfoot Petition).

¹⁰⁹ *See id.* at 8-9.

¹¹⁰ The Blackfoot Petition remains pending.

issues with the portal and not require a petition for waiver, either to itself or the Commission, to resolve such technical failures or other technical issues associated with the reporting tool. Clarifying this scope of USAC's authority also will properly balance the need for accurate, corrected data in the portal with the burdens on providers to foster it, even the more so when inaccuracies are not due to any provider action or inaction to begin with.¹¹¹

In sum, as the Universal Service Administrative Company, "administrative" is USAC's proverbial middle name. The Commission must both limit USAC's substantive role, while enhancing its administrative role, in the challenge process accordingly.

Evidentiary Standard. The 2nd NPRM seeks comment on what evidentiary standard the Commission should establish to resolve challenges.¹¹² The Commission should apply a "clear and convincing" evidence standard. The clear and convincing standard of evidence "is intermediate, being more than mere preponderance, but not to extent of such certainty as is required beyond reasonable doubt as in criminal cases."¹¹³ It properly balances the Commission's interest in avoiding unreliable or malicious challenges to coverage data¹¹⁴ with its interest in obtaining public feedback to enhance accuracy of the Commission's broadband coverage data and maps.

In addition, the burden of proof must reside with the consumer or entity filing the challenge. While not directly addressing the burden of proof generally, the 2nd FNPRM notes that the Commission wants "to avoid bad-faith or malicious challenges to coverage data" and poses questions about ways to avoid that.¹¹⁵ In so doing, it tacitly and properly acknowledges

¹¹¹ See *R&O* and 2nd FNPRM at ¶ 93.

¹¹² See 2nd FNPRM at ¶ 95.

¹¹³ Black's Law Dictionary 227 (5th ed. 1989) (citing *Fred C. Walker Agency, Inc. v. Lucas*, 211 S.E.2d 88, 92 (Va. 1975)).

¹¹⁴ See *R&O* at ¶ 20.

¹¹⁵ See 2nd FNPRM at ¶ 97.

that the burden of proof should lie with the entities challenging providers' data. The Commission should formally clarify that to be the case. Likewise, establishing this predicate that challengers comply with reasonable *prima facie* submission criteria will help to promote the Commission's objective of avoiding "bad-faith or malicious challenges to coverage data."¹¹⁶

Challenger Certifications. The 2nd FNPRM proposes to require that individuals challenging coverage data certify that they have requested service from the provider, and that the provider either refused or failed to provide service within the applicable 10-business day window.¹¹⁷ The Joint Commenters strongly endorse this proposal. However, the certification also should attest to the truth, accuracy, and completeness of the challenger's assertions to the best of the challenger's knowledge, information and belief. Providers are required to support their own filings with a certification of that scope, so it is only fitting that a challenge of the substance of such filings be supported with an attestation of equal weight.

The Commission also should require all challenger certifications to be under penalty of perjury. Not only does the Commission commonly require certifications to be supported in this manner,¹¹⁸ but doing so in the challenge process will assist the Commission in fulfilling its objective of inhibiting bad-faith or malicious challenges. Regardless of the ultimate scope of the certification requirement, any challenges not supported by a certification meeting all of the Commission's requirements must be summarily dismissed with prejudice.

¹¹⁶ *Id.* at ¶ 97.

¹¹⁷ *See id.* at ¶ 91.

¹¹⁸ *See, e.g., Procedures for the Mobility Fund Phase II Challenge Process*, Public Notice, 33 FCC Rcd 1985, 2004, ¶ 40 (RBATF/WTB/WCB 2018) (entities participating in Mobility Fund Phase II challenge process of provider coverage data must support challenge with certification under penalty of perjury of truth, accuracy, and completeness of challenge). *See also, e.g.,* 47 CFR §§ 51.333(c)(5) (objection to an incumbent LEC's short term notice of network changes or its copper retirement notice must be supported by certification under oath and subject to penalty of perjury), 54.410(d)(3) (the form for Lifeline enrollments shall require each prospective subscriber to render various certifications under penalty of perjury), 64.604(c)(9)(4) (certification by consumer of need to use IP Captioned Telephone Service must be made under penalty of perjury).

Instances Where Provider Denied Access to Building. The 2nd FNPRM invokes the scenario of how to treat a provider’s “served” claim where the provider would be able to serve a building but for the building owner’s refusal to grant the provider access to the building.¹¹⁹ In such a case, the Commission should consider the building “served” by the provider. Not only would the provider be able to meet the provisioning within the 10-business days standard if afforded access to the building, but it is probable that a denial of access would be due to another provider already serving the building. In such a case, regardless of which provider is serving the building, each location in the building would be served by *someone*, and thus should be mapped as “served.”

For the same reasons, the provider unable to access the building should not be required to correct its polygons to carve out such buildings, nor otherwise suffer any ramifications from including such buildings in its polygons. Doing so would misleadingly convey the impression that the provider is unable to serve the building, which would not be the case in the absence of the building owner’s recalcitrance.¹²⁰

B. Only Governmental/Tribal Entities Should Be Eligible To Submit Bulk Challenges

The 2nd FNPRM seeks comment on whether the Commission should direct USAC to accept the upload of bulk challenge data and, if so, how to safeguard the integrity of such

¹¹⁹ See 2nd FNPRM at ¶ 96.

¹²⁰ The Joint Commenters also note that the comment cycle is still open on a notice of proposed rulemaking exploring ways to facilitate greater consumer choice of broadband and other communications services for Americans living and working in multiple tenant environments, the outcome of which has the potential to promote providers’ access to buildings from which they are currently foreclosed from providing service. See generally *Improving Competitive Broadband Access to Multiple Tenant Environments; Petition for Preemption of Article 52 of the San Francisco Police Code Filed by the Multifamily Broadband Council*, Notice of Proposed Rulemaking and Declaratory Ruling, FCC 19-65 (July 12, 2019). This, of course, is yet another reason why the building should be considered served by the provider.

submitted data.¹²¹ In this regard, it seeks comment on whether the Commission should limit permissible bulk filings to certain classes of users, specifically identifying various state and local government and Tribal entities.¹²² The Joint Commenters request that the ability to submit bulk challenge data be strictly limited to such governmental and Tribal entities.

The Joint Commenters appreciate the Commission’s goal to avoid bad-faith or malicious challenges to coverage data, which, as the *2nd FNPRM* acknowledges, could easily be facilitated *en masse* via an automated tool or bot.¹²³ The Joint Commenters recognize the merits of permitting local, state, and Tribal governmental entities to provide data in bulk, especially, as stipulated by the *2nd FNPRM*, where such entities already have investigated the bona fides of the data.¹²⁴ If the Commission does permit bulk challenge filings contoured in this manner, it should direct USAC to track such filings and notify providers of them in the same manner as USAC will for individual filings.¹²⁵ However, notwithstanding the safeguard of the filing entities already having investigated the data, the Commission still must assign the burden of proof to the challenging entities,¹²⁶ as their subjective consideration of “clear and convincing evidence” may differ from that of the Commission, and maintaining the integrity of the process will be assisted by challenge review standards being as uniform as possible.¹²⁷

If the burden of proof remains on challenging entities, and the Commission limits permissible bulk filings as delineated above, the Joint Commenters would be comfortable with

¹²¹ See *2nd FNPRM* at ¶ 97.

¹²² See *id.* at ¶ 98.

¹²³ See *id.* at ¶ 97.

¹²⁴ See *id.*

¹²⁵ See *2nd FNPRM*. at ¶ 98.

¹²⁶ See *id.*

¹²⁷ In turn, uniformity will be facilitated by such reviews being limited to Commission staff, who will receive the same training and be poised to develop a relatively uniform *modus operandi* for review through case studies, “comparing of notes” regarding the challenge process, and shared management reviews of implementation of the process.

the Commission foregoing a certification requirement for such governmental filers,¹²⁸ as it could be quite unwieldy and inhibit such filings.

C. With The Exception Of Coordinates, The Data Proposed For USAC To Collect For The Challenge Process Is Sound

The *2nd FNPRM* proposes to have USAC collect from entities challenging coverage data the address and/or coordinates of the location at which coverage is questioned, the identity of the fixed provider in question, the download and upload speeds available, the technology offered, and submitting party contact information.¹²⁹ This inventory of data generally strikes the proper balance between critical information to process a challenge and limiting burdens on challengers and providers that may need to review challenges, as well as on USAC and Commission staff. The Joint Commenters support it, with the exception of the provision of geographic coordinates.

Permitting the submission of geocoordinates, particularly by individuals, inevitably will lead to a “garbage in, garbage out” problem, and force providers, USAC and Commission staff, into innumerable wild goose chases trying to sort the data out or corroborate it with the address data provided. The inconsistency and unreliability of commercial geocoding software is well documented,¹³⁰ and the Joint Commenters are significantly concerned with the daunting prospect of data submissions by an armada of “DIY” geocoders. In addition, to the extent the *2nd FNPRM* proposes the submission of address “and/or” geocoordinate data, the result will be a patchwork of address-only, geocoordinate-only, and address-and-geocoordinate data. As the Joint Commenters suggest above with respect to potential bulk data filings, the challenge process will be more conducive to consistent results the more it can limit variability in the inputs.¹³¹ Having

¹²⁸ See *2nd FNPRM* at ¶ 97.

¹²⁹ See *id.* at ¶ 91.

¹³⁰ See, e.g., Letter from Mike Saperstein, Vice President, Policy & Advocacy, USTelecom, to Marlene Dortch, Secretary, FCC, WC Docket Nos. 10-90, 19-195, 11-10, at 1 (filed Sept. 4, 2019).

¹³¹ Of course, yet another benefit of implementation of the Fabric will be a common “language” to

to inevitably rectify inaccurate coordinates and trying to harmonize them with addresses presents the likelihood of considerable burdens all around with no discernible benefit as to data accuracy or otherwise. The Commission should decline to accept coordinate data from challengers.

V. THE COMMISSION SHOULD SUNSET FORM 477 AFTER PROVIDERS HAVE SUBMITTED REQUIRED DATA INTO THE FABRIC PORTAL

The Commission asks whether and to what extent it should discontinue the broadband deployment data collection that is part of Form 477 once the new data collection process has been established.¹³² While the Joint Commenters believe that the Fabric will be a far superior alternative to the current Form 477 collection, the Commission should exercise caution to ensure that the public, providers, the Commission and USAC staff have a sufficient opportunity to transition to the new reporting and challenge process before sunsetting Form 477 broadband reporting.

The Joint Commenters note that Form 477 also requires reporting by fixed providers of facilities-based voice information. In the Joint Commenters' estimation, many aspects of this reporting obligation have outlived their utility. Today universal service decisions are typically made based on broadband availability, rendering some aspects the current FCC Form 477 will no longer able to serve the purpose they once did. Accordingly, once the Commission replaces Form 477 with the new data collection, it should consider eliminating Form 477 reporting obligations that no longer serve a continuing need and are outweighed by the burden on providers and the Commission to maintain.

harmonize address and geocoordinate data. That fact, however, also would render the provision of geocoordinates by challengers superfluous.

¹³² See 2nd FNPRM at ¶ 101.

VI. CONCLUSION

The Commission should promptly adopt the Fabric which will vastly improve the accuracy and granularity of broadband availability and should require broadband availability reporting on top of the Fabric. The Fabric should be developed in parallel with the creation of a polygon-based portal. Coupled with visual management and the opportunity for public review of the data submitted to USAC, these measures will enable the Commission and other federal and state agencies to better direct support to areas that lack broadband and improve transparency with the public. As new reporting requirements are established, it is critical to ensure that the new data reporting and collection process is carefully crafted to balance benefits with burdens.

Respectfully submitted,

USTELECOM- The Broadband Association



By: _____
B. Lynn Follansbee
VP- Policy & Advocacy
601 New Jersey Avenue, NW, Suite 600
Washington, D.C. 20001
202-326-7200

**ITTA – The Voice of America’s
Broadband Providers**

By: /s/Michael J. Jacobs/s/
Michael J. Jacobs
Vice President, Regulatory Affairs

WISPA

By: /s/Louis Peraertz/s/
Louis Peraertz
Vice President of Policy

September 23, 2019